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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of	)	
Amendment of Parts 73 and 74	)	**MM Docket No. 96-58**
of the Commission's Rules To	)	
Permit Certain Minor Changes In Broadcast	)	
Facilities Without a Construction Permit	)	

Reply Comments of Mullaney Engineering, Inc.

Mullaney Engineering, Inc. (MEI), has reviewed the comments of the other parties currently on file in this proceeding and wants to add its support for the proposed rule changes as modified by some of the pending comments.

Increases in E.R.P.

The firm of Du Treil, Lundin & Rackley has an excellent suggestion that pre-notification should be permitted with the Quiet Zone so as to permit the filing of a 302 application in instances where an increase in ERP is proposed. However, we believe that this ability for pre-notification should also be extended to FCC monitoring stations and Table Mountain.

Program Test Operation for FM Stations with Directional Antennas

We support DLR's request that the initial operation be limited to half-power. We believe the number of directional patterns with nulls that do not exceed half of the maximum ERP are few and, therefore, few stations would be deprived a higher initial operating power. As noted in the NPRM, the staff will continue to authorize full power operation by letter after examination of the license application. In the

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past, we have found this to typically be less than 10 days.

However, we believe that it should be clarified that the transmitter operating parameters supplied in the 302 should be those that generate the full/authorized ERP.

Change in Height of Antenna Center of Radiation

In light of the proposal to permit increases in ERP we fail to understand the hesitation in permitting changes in HAAT beyond the plus 2 meter & minus 4 meter tolerance proposed.

Increasing the HAAT with the same or higher ERP does not call into question a potential reduction in service. However, we believe that in today's competitive market place reductions in service will be few. In any event, we believe that a station should be permitted to increase its HAAT beyond the tolerance, provided such a change does not exceed the registered height of the structure. In instances where the new HAAT would exceed the maximum permitted HAAT the station should be permitted to automatically operate at maximum equivalent ERP for its class. Any change in ERP/HAAT should be required to comply with the restrictions previously proposed in the NPRM.

> To avoid changes in facilities by stations that do <u>not</u> qualify it would be helpful if a specific phrase is added to all future licenses indicating that they qualify to make changes via a 302. This could also be added as a item of information contained in the FCC's engineering data base.

Reductions in HAAT are a little more troublesome (although reductions are unlikely) in that there is a potential loss in service to both the area and to its city of license. However, where a station operates at reduced ERP and it is

possible for it to increase its ERP at the proposed lower HAAT to avoid a loss in service it should be permitted to do so. Any change in ERP/HAAT should be required to comply with the restrictions previously proposed in the NPRM.

The NPRM also states that the FCC's engineering data base will continue to show the originally authorized value for HAAT. In instances where the proposed change is more than 2 meters we believe that the data base & license should be changed to reflect the actual construction. The current instructions for the FCC 302-FM are silent on whether changes in antenna height that are within the permitted tolerance are to be provided when filing. Many licensee's have assumed that changes that are within the tolerance do not have to be documented in a license filing. This point should be clarified.

We believe some tolerance in HAAT is critical to permit for minor changes in antenna height at construction time. Any construction which meets the tolerance criteria should be permitted to operate at the authorized ERP (notwithstanding maximum permitted values). Changes in HAAT beyond the tolerance should be required to comply with all applicable rules (including R.F. Exposure).

FM Measured Directional Patterns

We agree with many of the comments that the requirement for the measured pattern to fill 85 percent of the composite pattern is unnecessarily restrictive. In addition, the proposed language is unclear as to whether the tolerance applies to the RMS of the relative field (voltage) pattern or to the "area" contained under the curve of the relative field pattern itself.

In recent years, the staff has evaluated the measured RMS against the originally proposed RMS. However, the NPRM appears to state that the "area" (not the RMS) will be used to determine compliance. If a minimum criteria is to be required of the measured relative field pattern we believe that it should apply to the RMS and not the "area". In order to compare the "area" under the curve with the relative RMS one has to square the relative RMS. Thus an 85% criteria based upon "area" would result in a minimum 92.2% criteria based upon RMS. We believe that this is much too restrictive.

We are attaching as Figure 1 a tabulation which compares the F(50,50) 60 dBu coverage for various percentages of maximum ERP (25%, 50%, 72.3% & 100%) for each of the FM classes assuming maximum HAAT. The value of 72.3% of maximum ERP was selected since this is what ERP would result if one achieved 85% of the RMS of the relative field pattern (0.85 squared = 0.723). The right-hand column of this figure provides a comparison of the percentage of coverage area resulting from operation at the reduced ERP when compared to that which would result using the maximum permitted ERP. To our surprise, 72.3% of maximum ERP always results in a 60 dBu coverage area which exceeds 85% of the coverage area resulting from maximum facilities.

While we believe that an RMS value of 70% or half power is more than adequate we believe that the rules should never require more than 85% of the RMS of the relative field pattern. The concern of spectrum warehousing is a little weak given that commercial Class C stations need only achieve 300 meters HAAT and, therefore, are only required to provide 62.2% of the maximum coverage permitted.

Protection to AM Stations

We applaud the staff's initiative to finally codify the required protection from other FCC licensee's to AM broadcast stations. However, like the other commentors pointed out, the evaluation criteria proposed here differs substantially from that contained in Section 22.371. Considering the disagreements that have already occured from outside the Mass Media Bureau, We believe that it would be more appropriate to place this new rule in Part 1 of the FCC rules since this would apply to all facilities over which the FCC has control.

As an engineering firm that has provided services to AM broadcast stations for over 40 years, we firmly believe that some level of protection is warranted. However, the currently policy is **totally inflexible** and is an unfair burden to other licensee's.

> As an example, special exemptions need to be made to permit the installation of facilities which have very small electrical heights (less than 30 degrees) at the AM frequency of concern. Under the current policy a 20' pole/antenna connected via 20' of coax to a transmitter immediately at the base of the pole has the same measurement requirement as does the erection of a 500' tower. We also believe that an FM can replace its antenna with one of nearly the same length (2:1 change in length) with negligible impact on the AM. Both of the above examples require "before/after" partial proofs costing thousands of dollars. In addition, the use of a single radius of protection for AM stations is unreasonable. AM stations operating on 620 kHz should be provided a larger radius of protection that is an AM station operating on 1600 kHz.

We believe a comprehensive review is needed of the various types of construction by FCC licensee's. Such a review will help to identify what steps need to be taken by other licensee's in order to establish reasonable assurance that the pattern of an AM station will not be adversely effected. We also believe that this review is beyond the scope of this NPRM.

Revisions to Section 73.1690

The NPRM proposes to modify Section 73.1690(b) to prohibit the construction of a new tower without the filing of a 301. However, provisions should be made to permit via a 302 application, the re-installation of an antenna on a "replacement" tower or on a "new" adjacent tower provided the coordinates don't change and provided the tower is properly registered with the FCC. Given the age of many towers it is quite common to replace an older tower with one that has additional capacity to hold new antennas. In addition, we have seen instances where an additional tower is erected immediately adjacent to an existing tower thereby using identical (to 1 second) geographic coordinates.

Section 73.1690(b)(2) should be expanded to include some tolerance on the geographic coordinates used in the evaluation of requirements specific to AM, FM or TV licensing procedures. The physical structure associated with the tower is still required to have proper registration with both the FCC & FAA. Given, the recent adoption of the FCC's Tower Registration program we believe that there will be numerous instances where existing facilities need to correct their coordinates by a few seconds. The staff has indicated that each will be handled on a "case-by-case" basis. However, given the limited resources of the staff we believe that this will be overly burdensome. A specific

tolerance on coordinates would permit such corrections with no adjustment to the operating characteristics (AM power or FM ERP/HAAT or TV ERP/HAAT). Without such a tolerance we believe that several existing facilities could be required to substantially reduce their facilities. To avoid abuse by facilities not yet constructed the tolerance could be limited to those structures constructed prior to July 1996.

R.F. Exposure Guidelines

The NPRM & its proposed rule changes make references in several places to "radio frequency **radiation** guidelines". However, given the current state of paranoia concerning biological effects resulting from radio frequency facilities we believe that a better phrase to be used in the rules is **radio frequency exposure guidelines.**

Respectively submitted.

John J. Mullaney

June 17, 1996.